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AIR FORCE MATERIEL COMMAND

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Maintenance

DEPOT MAINTENANCE TECHNICAL DATA AND WORK CONTROL DOCUMENTS (CORRECTED COPY)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements applicable provisions of AFPD 21-1, *Managing Aerospace Equipment Maintenance,* AFPD 21-3, *Technical Orders*, AFI 21-102, *Depot Maintenance Management,* AFMCI 21-301, *Air Force Materiel Command Technical Order System Implementing Policies*, AFMCMAN 21-1, *Air Force Materiel Command Technical Order System Procedures*, TO 00-5-1, *AF Technical Order System*, TO 00-20-5, *Aerospace Vehicle Inspection and Documentation,* and TO 00-25-195, *Source, Maintenance and Recoverability Coding of Air Force Weapons, Systems and Equipment,* as well as other applicable TO 00-20 and 00-5 series technical orders and 21 series directives.

This instruction defines responsibilities and provides procedures for the control and use of technical data within depot maintenance production. It provides policies and procedures for implementing technical data requirements for processing Work Control Documents (WCD). This instruction applies to all organizations performing depot maintenance at Air Logistics Centers (ALC) and the Aerospace Maintenance and Regeneration Center (AMARC) where applicable.

(AMARC) This supplement defines the AMARC policies and procedures for developing, tracking, scheduling, and maintaining work specifications and requirements. It applies to Comptroller (FM), Aircraft Management (LA), Logistics (LG) and Plans and Programs (XP) Directorates and the AMARC Safety Office (CC-SE).

SUMMARY OF REVISIONS

This instruction revises AFMCI 21-110, *Use of Technical Data in Organic Depot Maintenance*. The scope of the instruction has been expanded to include work planning information as it pertains to technical data and WCDs. Provisions have been added to allow electronic verification/certification of systems generated WCDs. There are no major changes in policy, although there are many minor adjustments, clarifications and some relevant information has been imported from other directives to establish interface procedures.

(AMARC) This is a new publication replacing an AMARC instruction.

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Chapter 1

TECHNICAL DATA AND WORK CONTROL DOCUMENT (WCD) POLICY

1.1. Purpose. This instruction provides policy and procedures for depot work planning and the development and use of technical data in compliance with Air Force policy. This document also provides guidance for processing, handling and storage of WCD.

1.2. General Policy. Compliance with Air Force technical data is mandatory. Technical data used for depot maintenance is approved and published through the single manager engineering function and includes Technical Orders (TO), Time Compliance Technical Orders (TCTO), Job Guides, work specifications, MIL Standards, commercial manuals, engineering drawings and instructional blue prints. Contract Field Teams (CFT), while working on any AFMC installation, must comply with this instruction.

1.2.1. All Air Force systems, subsystems, items of equipment and support equipment are operated, maintained and documented according to the procedures contained in technical data. Technical data is the only authorized source of information used to perform work or to develop local instructions to accomplish technical requirements. All manuals used as TOs must have a TO number assigned. Only verified TOs, as authorized by TO 00-5-1, shall be used for depot maintenance. Depot production functions will complete an AFTO Form 29, **Technical Order Delinquency Report**, to provide information on new and modified hardware and software that is received without verified TOs. Use of informal technical data (such as notes, manuals, drawings, etc.) including uncontrolled copies (or pages) of formal TOs **is prohibited.**

1.2.2. Specific TOs take precedence over general TOs. Conditions under which TO compliance may be waived are explained in TO 00-5-1, AFMCI 21-301, and AFMCMAN 21-1. All work affecting the quality of products and services must be described by clear and complete instructions appropriate to the circumstances of the task being performed. When specific technical orders do not contain procedures or processes, such as cleaning, plating, etc, general technical orders containing this information will be used. Military standards, specifications and similar documents apply to organic workloads if part of competed/organically contracted workloads or when specified by AFMC or higher level directives. If there is a difference in requirements between these documents, the more stringent requirement applies. The requirements of this instruction supersede earlier guidance of other AFMC instructions on the same subject, if conflicts exist.

1.2.3. Use of AFTO Forms in depot maintenance and data entry into the AF Maintenance Data Collection (MDC) system is accomplished in accordance with TO 00-20-2, *Maintenance Data Documentation*.

1.2.4. The most current version of the technical data will always be used. For those aircraft in storage at AMARC, use technical data prescribed by the requesting authority.

1.3. Waivers. Any policy waivers to this instruction will be sent to HQ AFMC/LG for action. The request will be coordinated through the ALC Quality Assurance Focal Point and signed by the ALC Commander. Requests for waivers will contain justification as to why the unit cannot comply with the existing guidance. Deviations, including “test” programs, are **NOT** authorized without prior HQ AFMC/LG written approval.

1.4. Technical Data.

1.4.1. Types of Technical Data. Technical orders, engineering drawings, AFMC Forms 202, **Nonconforming Technical Assistance Request and Reply**, process orders and abbreviated technical orders are the only authorized technical data. The type of technical data, required to be used by the mechanic/technician, is identified on a work control document.

1.4.1.1. Technical Orders (TO). TOs are the preferred source of technical information for all workloads. The Work Specification (work spec) is also a source of technical information. If formal TOs are not available, another technical document must be designated or created and approved for use (see TO 00-5-1).

1.4.1.2. Engineering Drawings. Engineering drawings/detailed blueprints are created and approved by cognizant engineering organization. They are commonly required to perform depot level manufacture, assembly, repair and modification of equipment requiring strict compliance to maintain configuration control.

1.4.1.3. AFMC Form 202. **Nonconforming Technical Assistance Request**. Reference paragraph 1.10.2.

1.4.1.4. Process Orders. Written process used where needed to describe specific applications, procedures, techniques, methods and shop practices to complement technical data. Reference paragraph 3.4.

1.4.1.5. Abbreviated Technical Data. Abbreviated technical data is a breakout listing of step by step tasks for a single operation, authorized by cognizant engineering authority. It includes Job Guides and TO checklists. When abbreviated technical data is in use at the job site, the complete TO must be readily available for reference. Abbreviated technical data is designed to complement technical data **not** replace it. Technicians must demonstrate familiarity with current TO. The complete technical data must still be readily available and be adhered to regardless of the detail provided in the WCDs or abbreviated technical data.

1.4.2. Technical Data Availability. Technical data prescribing repair procedures or servicing actions (that have not been reduced to definitized list or checklist format) will be available at the job site or in use as prescribed by TO 00-5-1 and defined in para. 1.5.3.1. General methods and procedures TOs need not be open and in use but must be readily available in the work area (i.e., same building, TO library, etc.).

1.4.2.1. The definition of **"readily available"** is within easy access to the job site as defined below.

1.4.2.2. The definition of **"at the job site"** is interpreted as: in the immediate vicinity where the work is being performed (i.e., work bench, aircraft stall, dock, etc.). The mechanic must be able to cite the governing TO for the task at hand, be able to go directly to it and find the source information, and must be doing the job according to the source documents and the TO

1.4.2.3. The definition of **"in use"** is: having the documents open to the correct page and in actual use.

1.4.2.4. For the purpose of this instruction: when a TO prescribes a procedure which has not been converted to abbreviated technical data, the TO will be readily available at the job site. For the performance of any critical task [as defined in AFMCI 21–108, *Maintenance Training and Pro-*

duction Acceptance Certification (PAC) Program , that has sequenced procedures, the mechanic must have the TO (or job guide if applicable) open to the correct page and in actual use. A critical task, as defined in AFMCI 21-108, is any task, that if not done correctly, can result in one of the following conditions: (1) a catastrophic failure of an end item; (2) an end item failure that may affect safety of flight; or (3) where end item failure may present an imminent safety/health hazard or affect a life support system.

1.4.3. Source of Technical Data. The single manager is responsible for publishing applicable system technical orders and approving associated technical data.

1.4.4. Posting Technical Data Changes. Changes to TOs must be monitored and documented, ensuring no process is compromised. The organization responsible for posting changes to technical data (TD) will publish and provide a list of changes to the appropriate production supervisor and planning organizations. Changes to TD may require changes to the WCD. The planning organization is responsible for reviewing the TD changes, and the determination of WCD impacts.

1.4.4.1. (Added-AMARC) The Production Control Division, Policy and Technical Services Branch (LAAO), Technical Order (TO) library will:

1.4.4.1.1. (Added-AMARC) Notify the TO Distribution Account (TODA)/Planning area that a change has been received. (Document who was notified, date and time.)

1.4.4.1.2. (Added-AMARC) Follow-up in 2 workdays if the TODA/planner have not picked up or signed for the change.

1.4.4.1.3. (Added-AMARC) File signature, time and date when TODA/planner picked up changes.

1.4.4.2. (Added-AMARC) TODA/planning will:

1.4.4.2.1. (Added-AMARC) Pick up TO changaes from the TO library within 2 days of change notification.

1.4.4.2.2. (Added-AMARC) Update TO in accordance with (IAW) TO 00-502, *Technical Order Distribution System.*

1.4.4.2.3. (Added-AMARC) Update and publish work control document (WCD) to reflect TO changes.

1.5. Work Control Document (WCD). The WCD is the official record for work including control, identification, PAC and routing of items. It is normally system generated or preprinted. **WCDs are not technical data.** The WCD is an instruction and guidance document summarizing sequenced steps and the TO references for processing the item. System generated, comparable WCDs should be used, must be auditable and meet the requirements of this instruction. Electronic signature and verification techniques, when available, may be used in lieu of stamp authentication if the automated system provides the necessary security. The amount of detail of these work instructions and technical data references on WCDs is determined by the production planning team and is dependent on the type of work, complexity of work, and repetitiveness of work assignments. WCDs shall not be certified unless all required technical data requirements are completed. WCDs provide information to control required work tasks, including the task, skill, sequence, duration, project, funding, and inspection level of the work to be performed. The WCD is the record the task was performed by certified technicians IAW the statement of work (SOW), using authorized technical data. They are developed by authorized industrial engineering/planning tech-

nicians in accordance with approved technical data. Absolute control of technical data, work control documents, and work specifications is critical to producing conforming products and services in support of AFMC customers. Unauthorized deviations from technical data will not be tolerated. This instruction or other directives do not authorize use of informal data or uncontrolled data of any kind. The procedures in this instruction will be carefully followed and supported to ensure products and services meet all technical requirements. All critical tasks must be listed and certified as a separate line item.

1.5.1. Initial process for development of WCDs. During the early acquisition stages of a new system, the Maintenance Activation Planning Team (MAPT) will include a long-range industrial engineering/ planning technician ,referred to as a Planner (reference: AFMCI 21-101, *Depot Maintenance Activation Planning).* After the system becomes operational, a maintenance planning team must be formed. The composition will change and chairpersonship will pass to the industrial engineering/planning technician for the system or subsystem. The new team is then called the "Production Planning Team." Under the product directorate organization, there is normally only one planning team and membership will remain constant. The exact timing of the changeover of teams will be at ALC discretion. Where there is a modification to a postured system that requires a Decision Tree Analysis (DTA), the policies of AFMCI 21-101, *Depot Maintenance Activation Planning,* are used. The industrial engineering/ planning technician, as a member of both the MAPT and production planning team, plays a major role in the development of WCDs for each item worked at the depot. This is accomplished through the Logistical Support Analysis (LSA) and prototype processes where a maintenance task analysis is performed for each item repaired and through the normal day-to-day planning activities after formation of the production planning team.

1.5.2. Types of Work Control Documents.

1.5.2.1. AFMC Form 958/959, **Work Control Document**. AFMC Forms 958/959 or Inventory Tracking System (ITS) equivalent are normally used for all repetitive workloads processed through maintenance shops. When AFMC Form 958/959, is used in this instruction, it also refers to the systems produced versions (i.e., G337, ITS WCD). These forms will not be used for the repair and certification of test, measurement, and diagnostic equipment (TMDE) and work. AFMC Form 959 may be used as a Definitized List for handscribed AFMC Forms 173, **MDS/ Project Operation Assignment**.

1.5.2.2. AFMC Form 173, **Mission Design and Series (MDS) Project Workload.** The WCD normally used for the repair and certification of most aircraft work is AFMC Form 173 or system produced equivalent. AMARC will use AFMC Form 959 or an AMARC system generated WCD. AFMC Form 173 lists an operation which may require the performance of a single step or multiple steps before the entire operation is complete. This form is used with the applicable technical data or with more detailed work instructions. When an operation requires more than one step, a step-by-step breakdown of the operation is required in order to have definitive certification of step completion. When this is the case, a MDS/Project Operation Detailed Description (definitized task breakout) must be used. Certification requirements, i.e., PAC, secondary certification, and in-process secondary certification tasks are identified and a place provided for the task to be certified on the detailed description. The use of maintenance stamps is mandatory, for certifying task completion. **Use of initials and employee numbers are not permitted.** Certification on the AFMC Form 173 will not be accomplished until all tasks within the detailed description have been certified as complete. If one or more, but not all, of the steps on the detail description require secondary certification, the AFMC Form 173 will carry the highest certification called out in the

description. The GO97, *Programmed Depot Maintenance Scheduling System (PDMSS)* produces a computer version of AFMC Form 173. The GO97 WCD may contain additional data elements.

1.5.2.3. Handscribed AFMC Form 173. In some cases, handscribed WCDs must be used for unpredictable discrepancies. If this is required, all applicable blocks must be completed and entries must be legible and the WCD must be coordinated through the Maintenance Review Team (MRT)**.** MRT will not accept handscribed WCDs until the supervisor has assigned certification code and affixed a "P" stamp above the code. Handscribed AFMC Forms 173 may use an AFMC Form 959 as a Definitized List. **The initiator must cite the appropriate technical data for the discrepancy as well as all follow-on requirements and operational checks.** If the initiator does not know the correct references or required follow-on requirements (i.e., different skill), the supervisor must be notified.

1.5.2.4. Definitized Lists. Definitized lists supplement WCDs by listing step-by-step tasks for a single operation listed on the WCD, which must be worked in sequence. When completed they are attached to, and become a permanent part of, the WCD. When used, the source data (i.e., TO) must be available in the general work area in case the worker requires additional details. Tasks listed on a definitized list which require secondary certification will be so indicated on the definitized list. Secondary certification will be given to that task before work on the next task begins. Definitized lists may be used to supplement AFMC Form 173 and AFMC Forms 127/ 127A/137 work, because those WCDs do not lend themselves to listing all tasks within an operation. Definitized lists must be updated and in complete agreement with the source document. If there are conflicts the source document prevails. If a definitized list is developed, it must be open and in use.

1.5.2.4. (AMARC) Demilitarization (demil) and radiation packages are definitized lists used in the reclamation area.

1.5.2.5. AFMC Form 127/127A, **Routed Order, and AFMC Form 137, Routed Order (Proj Dir)**. AFMC Forms 127/127A/137, or a system produced comparable form, may be used as the WCD when designated by the production planning team. The aircraft tail number must be included along with the MDS so that mechanics can tell if the item is the original item repaired or if it is a replacement item. If the required task on the routed order is for an operation containing more than a single task, a WCD with a detailed description **must** be prepared and certified. If secondary certification is required, use of a WCD may be necessary to ensure accomplishment/ accountability of each critical task. Items routed between organizations processed using Routed Order documents require the tasked organization to develop a definitized document in compliance with this instruction.

1.5.2.6. Nonprogrammed Work. Nonprogrammed work is work authorized by AFMC Form 206, **Temporary Work Request**. Reference to all technical data applicable to the work being requested will be made on the Statement of Work (SOW). The responsible industrial engineering/ planning technician prepares an AFMC Form 237, **Temporary Labor and Material Plan**, for each nonprogrammed work request. Once input, a series of documents, including a temporary job record, G004L-L3A, will be generated. An AFMC Form 240, **Temporary Labor Plan**, is used to plan additional labor and material after the AFMC Form 237 is established. The G004L-L3A **will not** be used as the WCD. AFMC Form 959 or comparable system produced document **will** be used as a WCD for nonprogrammed work.

1.5.3. Technical Information on WCDs.

1.5.3.1. Technical Data Usage Requirement. All WCDs must contain the technical data reference (the statement "TO Not Required" will be made on WCDs, which are administrative in nature). When the WCD states "perform task **REF** Applicable TO," then the TO must be readily available. When the WCD states "perform task **IAW** applicable TO", then the TO must be open and in use. Technical Data, called out on the WCD, may reference additional TOs or drawings necessary to accomplish task. Due to space constraints on AFMC Form 173, the primary TOs may be the only ones referenced on the WCD.

1.5.3.1. (AMARC) When an item or procedure is not specifically identified in the TO, the system TO (i.e. hydraulics, engines, structural) will be referenced as a guide in completing the task. If no technical (tech) data exists because the aircraft has been deleted from the military inventory, a civilian aircraft or a non-US aircraft may be used or the statement No Tech Data Available (NTDA) entered. A supervisor P stamp will be used and best common maintenance practices followed to perform the task. *TO not required* is extended to include packing, motor pool transporting parts/equipment, motor pool lifting parts/components while assisting mechanics, tagging parts, building modules, and shipping parts. These items will also be identified with an X in the first position of the WCD Production Acceptance Certificate (PAC) certification block and require no stamp or PAC certification.

1.5.3.2. Skill Code. The WCD will specify the skill required to perform the operation.

1.5.3.3. Inspection/Certification Codes. These are codes utilized for determining the type of certification required on a work control document and/or an inspection process. The planner preparing the work document is responsible for including secondary certification requirements on WCDs. Production supervisors must identify critical tasks to the planners if they are not identified in the technical data. When supervisors are not fully familiar with the work, they must ensure a qualified work leader or journeyman technician/mechanic reviews WCDs to ensure all critical tasks have been identified. Nonsafety of flight/noncritical tasks normally only require a single certification. Safety of flight/critical tasks must receive secondary certification. Therefore, these tasks must be listed separately (a separate line item entry) on the WCD. Local procedures must be developed to document work accomplishment for critical **TEAM** tasks that are accomplished by several individuals and for all work accomplished by more than one person due to shift change. Any task that, if not properly performed or if omitted, would result in a safety hazard or possible catastrophic failure, must be listed on the WCD and will require secondary certification before work on the next listed task or operation begins. Any task not completed, in the expected sequence, must be documented separately. As a minimum, any step with CAUTION or WARNING in the TO **will normally require secondary certification.** A maintenance stamp will be used to indicate work completion and certification.

1.5.3.4. Changing Inspection/Certification Codes. Inspection/Certification codes can only be changed, in-process, by two functions. A supervisor can upgrade a code if a sample secondary certification is desired. This will be a **Red Ink** pen and ink change that can later be changed back by the same supervisor. The supervisor will also affix a "P" stamp above the inspection block, if a change is made. An in-process operation can also be changed by Quality, by adding a "Q" in the second position of block 29. The Production Planning Team must make any downgrades to an inspection/certification code.

1.5.3.5. (Added-AMARC) For critical team task involving several individuals, the senior PAC certified individual from the primary work center is responsible for documenting work accomplished.

1.6. Functional Check Flights (FCF) and Maintenance Operational Checks (MOC) Documentation. FCF and MOC documentation will be according to the basic policy contained in TO 1-1-300, *Acceptance Functional Check Flights and Maintenance Operational Checks*. After AFTO Form 781s are reinitiated, some maintenance actions may involve the use of WCDs or WCD packages. MOCs that are a step in the WCD or WCD package must be cleared in the WCD or WCD package. However, the discrepancy that led to such maintenance action must be cleared on the AFTO Form 781. WCD or WCD packages that could be used after transfer of the aircraft **will** be structured so that the last entry requires: (1) clearance of the AFTO Form 781 discrepancy, if applicable; (2) AFTO Form 781 entries of other discrepancies found during the maintenance action; and (3) documentation of all open actions remaining at the time of transfer of the aircraft to the preflight unit. All flight preparation documentation will be in accordance with TO 00-20-1, TO 00-20-5, and other applicable TO 00-20 series directives.

1.6. (AMARC) Flyaway aircraft will be processed using the WCD to manage all maintenance actions until the aircraft is ready for the preflight inspection. At this time all open or delayed maintenance discrepancies will be transferred to the AFTO Forms 781A, Maintenance Discrepancy and Work Document forms. The aircraft crew chief, flight line supervisor, specialist supervisors, flight test and pilots will review the forms to ensure all tasks have been completed and stamped or entered into the AFTO Forms 781A where approved.

1.6.1. (Added-AMARC) Discrepancies discovered during and after the preflight will be documented on the applicable AFTO 781A.

1.6.2. (Added-AMARC) After preflight, the AFTO 781 series forms will be used for all required maintenance and aircrew discrepancies.

1.6.3. (Added-AMARC) All discrepancies remaining in the work control document workbooks will be carried forward to the AFTO Form 781A, or AFTO Form 781K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document, as applicable.

1.6.4. (Added-AMARC) The workbook will be closed out and the completed WCD/Production Work Orders (PWO) and AFTO Forms 781 will immediately be sent to LAAO, Aircraft Records.

1.7. Certification/Qualification Requirements for Depot Maintenance Person nel. All Depot Maintenance Personnel must be trained and qualified to the extent necessary to perform assigned duties. Qualification and Certification requirements are defined in AFMCI 21-108.

1.7.1. PAC. All WCDs must be certified by a PAC certified technician IAW AFMCI 21-108 which provides guidance on the PAC program, as well as Special Skills Qualifications (SSQ). Skills are identified, either at Command level or locally. Proper development and use of technical data are essential to the functioning of these critical programs and to ensure quality products from depot industrial operations. Work documents must be sufficiently detailed to allow documentation of all required certifications.

1.7.1. (AMARC) See attachment 7.

1.7.2. Planners & Schedulers WCD Training. Industrial Engineering/Planning Technicians (Planners) must be trained to properly read and interpret Technical Data; i.e., Engineering Drawings, Blue-

prints, TOs and Work Specifications. They also need systems training to produce WCDs, associated documents and reports. Legacy systems, such as G097, G037, ITS and G004L, all produce WCDs or have associated forms which are called WCDs (959/958). Schedulers need to be trained on these systems, how to read and interpret reports, and their part in processing and clearing WCDs.

1.7.2.1. Planners Initial Training Requirements. Defense Work Methods and Standards, Labor Standards, Performance Rating (Leveling), Technical Order/Blueprint Reading and Interpretation.

1.7.2.1.1. Commodities Planners Specific: Temporary Workload (G004L), Express, ITS and Management of Items Subject to Repair (MISTR).

1.7.2.1.2. Aircraft Planners Specific: MDS/Project Workload Planning System (G037E), Programmed Depot Maintenance Scheduling System (PDMSS) (G097), Temporary Workloads (G004L) and Weapon System Specific Familiarization Course (only the last item applies at AMARC).

1.8. Data Collection on WCDs. Provisions will be made to annotate measurements, test results, AFTO Form 95, **Significant Historical Data,** entries, time changes and calendar inspection items complied with on the WCD or attached data sheet when such annotation is required. Requirements can be generated by technical data, the production planning team, work specifications, quality plans, or when a precise audit trail is needed. Data sheets used to annotate measurements or test results will be filed with the WCDs.

1.8. (AMARC) For reclamation of aircraft parts, the WCD documents will be annotated or stamped *records action required*. After performing the task the mechanic or work leader will notify Aircraft Records to update the applicable historical data records such as engine removal.

1.9. Electronic WCDs. Computer systems generated WCDs without hard copies are authorized and encouraged as long as the accuracy and integrity of the documents can be maintained and the minimum documentation is accomplished as required by this and other applicable instructions. For Automated Data Processing Systems (ADPS) that have the capability, electronic completion and certification of WCDs is encouraged to include PAC and supervisory certifications. These systems must have sufficient built-in safeguards (PINS, electronic signatures, passwords, firewalls, etc.) to ensure system integrity is maintained and that a reliable audit trail is maintained. The Records Section must retain electronic records for a minimum of two years.

1.9. (AMARC) See attachment 9, Accessing and Updating AFMC Forms 959, for work control document data for stage and retrieval.

1.10. TO Changes and Authorized Deviations. Technical data used in depot maintenance must be complete, accurate, effective and efficient. It is the responsibility of maintenance personnel at all levels to ensure deficiencies are reported in a timely manner and improvements made when needed. When work cannot be performed using the TO as written, an authorized deviation must be processed and approved. AFTO 22 or AFMC Form 202 is sent to the appropriate engineering/planning function which processes the request and forwards it through specified channels.

1.10.1. AFTO Form 22, **Technical Order System Publication Improvement Report and Reply.** This form provides the mechanism by which improvements and corrections to TO deficiencies may be made. TO 00-5-1 provides detailed instructions on the routing of TO deficiency submissions. It is the responsibility of the individual discovering a TO deficiency to initiate an AFTO 22.

1.10.2. AFMC Form 202, **Nonconforming Technical Assistance Request.** This form is the only method for requesting and furnishing technical data for: (a) conditions or procedures beyond TO authority under work stoppage and nonwork stoppage conditions and (b) when TO procedures do not exist and must be developed, approved and provided to depot workers. Use procedures found in AFMCI 21-301 and AFMCMAN 21-1, chapter 5. In either case (AFTO 22 or AFMC Form 202), the change request is sent to the appropriate engineering/planning function which processes the request and forwards it through specified channels. The AFMC Form 202 instructions are authorized for use until the reported deficiency is corrected or for a maximum of 120 days, at which time a new AFMC Form 202 must be generated if maintenance is still required. For a commodity that is noncompliant, use AFMC Form 76 to prevent more defective products being produced, until the discrepancy is corrected.

1.10.3. AFMC Form 76, **Material Review Tag.** This form is used to identify and help control the nonconforming product.

1.10.4. AFMC Form 252, **T/O. Publication Change Request.** An approved AFMC Form 252 is issued as a result of the AFMC Form 202 to provide the corrected or newly developed data necessary to resolve an actual or anticipated work stoppage. The completed AFMC Form 252 is stamped "Special Handling" (SH252) and is processed and inserted into the TO as detailed in AFMCMAN 21-1 and is used until replaced by the formal TO update.

1.10.5. AF Form 2600, **Engineering Order (EO).** An EO is used to document changes to engineering drawings as described in AFMCMAN 21-1.

1.11. Publications Familiarization. Supervisors must make sure subordinates are familiar with the directives governing their duty assignments and ensure the use of the most recent authorized technical data. The supervisor reviews new, revised, or changed publications and advises personnel of significant changes. All changes in critical/safety related information (such as cautions and warnings) will be emphasized. In addition, the supervisor determines if new, revised or changed publications affect the qualifications/certifications of personnel and the entries on the WCDs or definitized lists. If these areas are impacted, steps are taken to bring both personnel and work documents into conformance with the new requirements. For significant/critical changes retraining/requalification and demonstration of proficiency may be required before personnel are recertified on the task. Training must also be notified of any significant changes.

1.11.1. TO and WCD Training. Depot Maintenance Employees will be trained on technical data and WCD use and responsibilities as described in this instruction. This will include aircraft documentation IAW TO 00-20-5 for all personnel who work on aircraft. Both procedural guidance and the responsibilities associated with completing the documentation required will be stressed. Training will be tracked in the Education and Training Management System.

1.12. Rework. Collection and analysis of rework data is essential to promoting efficient and effective processes. Rework is any work accomplished to correct deficiencies in work previously accomplished.

1.12.1. Documentation of Rework. When it is necessary to rework an item, the item and the accompanying WCD retreat to the first step requiring reaccomplishment, then the normal sequence is followed to completion. The WCD is flagged with a red diagonal at the operation/task where the defect or deficiency is discovered. The red diagonal is drawn through the stamp of the mechanic who PAC certified the operation/task, but must not obliterate the entry. An overlay, either the actual WCD or a

document in the AFMC Form 959 format, that includes all operations/tasks that must be reaccomplished, is attached to the original WCD. All operations/tasks are again certified as they are reaccomplished. If more than three operations/tasks must be redone, a new WCD containing all operations/tasks will be used. Voided WCDs are attached to the new WCD. All WCDs used for rework will contain JON, P/N, S/N, and noun of the item. Block 12 will be annotated "REWORK" on all applicable AFMC Forms 959. Any other forms/systems WCDs will include this same information in a similar manner as locally directed. All rework must be documented to include the cost of material and labor expended in the applicable data system and to provide an audit trail of final certification of work reaccomplishment. Care must be taken to prevent over stamping, double stamping, or obliteration on the original WCD. Production count is not taken for rework. When rework results in material review actions, process the items according to AFMCI 21-301. Rework must be analyzed to determine causes and corrective action taken to prevent recurrence.

1.13. Deficiency Report Data. Deficiency data reported IAW TO 00-35D-54 (to include aircraft/engine acceptance discrepancies), must be analyzed by the Product Directorate QA Office. Technical data and WCD problems contributing to reported defects must be corrected. Changes to these documents must be formally requested and tracked to ensure effectiveness as part of the corrective actions as appropriate. The QA program must provide feedback to managers and supervisors. See AFMCI 21-115, *Depot Maintenance Quality Assurance (QA)*.

Chapter 2

TECHNICAL DATA AND WCD PLANNING AND RESPONSIBILITIES

2.1. General Planning Requirements. Timely and complete work planning is essential to provide labor and material standards, shop capacity, WCDs, and associated data to accomplish the depot production process. Product Directorates (PDs) are responsible for adequacy of production planning for their products and services. Planning requires detailed knowledge of production processes, data systems, directives, and technical requirements for the specific workload. The responsible industrial engineering/ planning technician(s) working with the appropriate planning teams integrate all the parameters into comprehensive WCDs to support their maintenance production functions. The goal is accurate, efficient and effective WCDs for use in the production functions.

2.1. (AMARC) Planners will coordinate with the workloaders to develop estimates and job plan/routing work. The statement *Estimate will only be valid for 90 days* will be on each Optional Form 27, 2-Way Memo request. If an aircraft is not listed, the estimate will assume worst case and will so state. All assumptions such as aircraft is towable will be documented. This information will be based upon the historical and general WCDs for similar type workloads. Copies will be filed for a minimum of current year plus 2 years.

2.1.1. Critical Workload Characteristics. If workloads contain critical characteristics (included in the work specification), such as safety of flight, life support, quality inspection/verification requirements, or Secondary Certification requirements, they must receive formal planning coordination as it applies to WCD preparation.

2.1.2. Depot Field Team (DFT) Activities. Special planning may be required for DTF activities depending on the operations/tasks assigned. WCDs are developed and kit proofed at the ALC prior to team deployment. Other work done in the field by the DFT will be planned and result in a package that will contain all required specific operations, PAC and quality requirements.

2.2. Preproduction Planning Team Procedures. The Preproduction Planning Team is composed of the primary planning, production and quality assurance functions. Representatives of the SPD Production Management and technical functions will also play a major role in the preproduction planning process. The magnitude of preproduction planning is determined by the complexity of the weapon system/end item and by the requirements established and negotiated by the responsible program/item manager. The preproduction planning team will accomplish the following actions:

2.2.1. Develop Major Workload Quality Requirements. All workloads must be covered by a quality plan or equivalent documented procedures as described in AFMCI 21-115, *Depot Maintenance Quality Assurance*. The identification of critical characteristics/parameters is an integral part of preproduction planning and is essential to the preparation of a comprehensive quality plan. The quality assurance team member must ensure the adequacy of the quality plan.

2.2.2. Ensure Technical Data is Available. The preproduction planning team will review preliminary overhaul/repair procedures and technical data. They also review the illustrated parts breakdown data to ensure all replaceable parts are identified and that the test station data is adequate to support maintenance. A production technician must be present when technical data, test station data and process procedures are being worked.

2.2.3. Determine Training Requirements. The preproduction planning team will determine if new workload or tasks will require additional training. If training is necessary, the organization PAC training monitor will be notified of the requirement and the additional training needed. The PAC training monitor will ensure adequate training is provided or developed, if none exists.

2.2.4. (Added-AMARC) When the planner receives notification, from workload, of a projected new or unusual workload requirement, the planners have the option to set-up a production planning team and schedule a meeting. The planner will determine the need for a production planning team based on the projected project's extent, complexity and any available maintenance history.

2.2.4.1. (Added-AMARC) The team will consist of the process planner, other planners, and knowledgeable individuals from the major production areas required for the particular project.

2.2.4.2. (Added-AMARC) The team will discuss specific projected project requirements; support equipment, sequence of events, duration of tasks, training, facilities, and any other pertinent input from team members.

2.2.4.3. (Added-AMARC) At the end of the meeting the planner will suspense the other team members for specific needs and man-hour estimates as required.

2.3. Production Planning Team Responsibilities. The Production Planning Team is composed of all the primary players from both support and production functions. Their WCD and technical data responsibilities are as follows:

2.3.1. Prepares and coordinates WCDs and required definitized lists when all work on an item is performed within the division. Receives inputs from other product divisions as they are involved in preparing and coordinating WCDs when the responsible production organization is within their division.

2.3.2. Prepares and coordinates WCDs for the work performed in the division regardless of the responsible production division assignment.

2.3.3. Provides inputs to other production divisions for their use in preparing WCDs when the responsible production organization is within another production division.

2.3.4. The production representative determines PAC and secondary certification requirements during repair/installation, IAW AFMCI 21-108, with coordination from the other members.

2.4. Planning Technician Function Responsibilities:

2.4.1. The planning representative serves as chairperson of the production planning team.

2.4.2. Ensures development, preparation, revision, and coordination of WCDs and Definitized Lists and the accuracy of technical contents thereof. When informed by the servicing TO custodian or production supervisor of data changes, makes sure WCDs and definitized lists are updated.

2.4.3. Notifies the scheduling function and production supervisor when revisions are made to WCDs and definitized lists so files can be purged of outdated documents.

2.4.4. Performs a review of WCDs and definitized lists jointly with the production supervisor and quality assurance specialist to ensure they contain all steps necessary for tasks performed by the mechanics at least every three years. The planner will review WCDs and definitized lists as necessary to ensure accuracy and currency. Reviews of WCDs will include confirmation of the availability of

complete and accurate technical data and that the work process complies with all applicable requirements and that inspection codes are still valid.

2.4.4. (AMARC) The planner will ensure that new work plans or work plan updates are coordinated with SE for compliance with regulatory programs such as confined space entry.

2.4.5. Planning will maintain a file of all Requests for Change of Work Packages until the next WCD Package Review.

2.4.6. Performs a review of all AFMC Forms 561, **Process Order,** biannually.

2.4.7. The Production Engineering Technician will maintain a file of submitted AFTO Forms 22.

2.4.8. Signs and dates the Master WCDs.

2.4.8. (AMARC) Reclamation WCD may be stamped with planner stamp in lieu of a signature.

2.4.9. The signed Master WCD Work Package will be maintained and stored in the Planning Office.

2.5. Production Responsibilities:

2.5.1. Provides a representative on the production planning team.

2.5.2. Assists in the development of the WCDs and definitized lists.

2.5.3. Coordinates on approved master copy of the WCDs and definitized lists.

2.5.4. Identifies tasks for inclusion on the WCDs that require PAC and secondary certification (end-product or in-process). All **Critical Tasks** will require consideration for secondary certification (Ref AFMCI 21-108).

2.5.5. Reviews new, revised, or changed publications. Provides recommendations to planning team concerning revisions to WCDs or definitized lists.

2.5.6. Performs review of WCDs and definitized lists jointly with the industrial engineering/planning technician, at least every three years, to make sure they contain all steps necessary for tasks performed by the mechanics.

2.5.7. Reviews handscribed WCDs and definitized lists to ensure all steps are complete and assigns a PAC certification code, affixing a “P” stamp above block 29.

2.5.8. Sends completed WCDs to the Scheduling Inventory Control organization for production count when the repaired item is assembled into the next higher assembly or a serviceable tag is attached. The GO97 Operation Performance Tracking Module will automatically take production count on an operation upon certification of the operation completion.

2.5.8. (AMARC) No applicable to AMARC.

2.5.9. Manually prepares, in conjunction with the scheduling inventory function, the transfer or route document for move, route, or identification when none is preprinted.

2.5.9. (AMARC) No applicable to AMARC.

2.5.10. Reviews and coordinates on the master copies of the WCDs and definitized lists.

2.6. Maintenance Technician or Mechanic Responsibilities. The responsible mechanic or technician stamps and dates the WCD or definitized list to indicate the work was completed and that it meets the

requirements of the source technical documents. Electronic certification is authorized if the Automated Data Processing System (ADPS) has this capability (see paragraph 1.9). This certification must be at the completion of each task on a definitized list. When all tasks on the definitized list are certified, the mechanic will verify completion of the operation on the WCD. Where both tasks and operations are listed on the WCD (i.e., AFMC Form 959) each separate entry must be verified or certified upon completion. All certifications must be legible. AFMCI 21-108 provides guidance for task certification.

2.6.1. Files an AFTO Form 22 for any TO deficiency and inform supervisor of the deficiency.

2.6.2. Submits a Request For Change to Work Package (locally designed) to Planning through the supervisor for WCD discrepancies.

2.6.3. For stumble-on tasks, annotates steps on a definitized document to ensure all disturbed systems are documented and follow-on operations are accomplished.

2.6.4. Documents AFTO Form 781s IAW TO 00-20-5.

2.7. Scheduling/Inventory Control Function Responsibilities:

2.7. (AMARC) The process schedulers use the sales order and job plan or route information to make the PWOs. The process schedulers pass the WCDs to the work center scheduling function.

2.7.1. Provides a production planning team member to help formulate WCDs and definitized lists.

2.7.2. Reviews and coordinates on the master copies of the WCDs and definitized lists.

2.7.3. Maintains files of preprinted WCDs and definitized lists and reorders when replenishment is required if a manual system is used.

2.7.3. (AMARC) No applicable to AMARC.

2.7.4. Purges files of outdated and obsolete WCDs and definitized lists.

2.7.5. Enters the date scheduled and date completed on the WCD. The date scheduled (input date) is the date the asset receipt transaction is input to the depot stock control system. The date completed (output date) is the date the asset turn-in transaction is input to the depot stock control system.

2.7.5. (AMARC) No applicable to AMARC.

2.7.6. Receives completed WCDs and definitized lists and retains them in an auditable file for the period prescribed in Air Force Manual 37-139, *Records Disposition Schedule.* Documents may be retained for a longer period at local discretion if they are critical in nature and the justification is documented.

2.7.7. Manually prepares, in conjunction with the production supervisor, transfer/WCDs for move, route, or identification when none have been preprinted.

2.7.8. Completes portions of preprinted WCDs as designated by the production planning team.

2.7.8. (AMARC) No applicable to AMARC.

2.7.9. Enters item serial number on the WCD when item is delivered for work.

2.7.9. (AMARC) No applicable to AMARC.

2.7.10. Receives and distributes WCDs and monitors progress against the schedule.

2.7.11. Reviews WCDs to ensure all required certification and quality blocks have been stamped prior to production count.

2.8. Responsible Quality Assurance (QA) Representative. The QA representative responsible for the workload QAP will review all applicable WCDs for the work performed. This review will ensure that all PAC requirements and other quality assurance provisions required by the workload quality assurance plan (or equivalent documented procedures) are included in the WDDs as required by the governing quality assurance plan (see AFMCI 21-115).

2.8.1. QA will determine quality verification requirements during repair/installation IAW AFMCI 21-115.

2.9. Maintenance Stamps. Stamps are issued to maintenance personnel to denote status on WCDs. Other stamps may be authorized locally. Alpha and numeric characters may be added to stamp designs as long as the size and basic information is retained.

2.9.1. The types of stamps include:

- Quality inspection (Q)
- Test (T)
- Mechanic (M)
- Supervisory verification (P)
- Calibration (K)
- NDI (N)
- Planning (IET)
- Scheduler (C)
- MRT
- PAO
- (AMARC) Radiation (R)

2.9.2. Local operating instructions to retain control of stamps must include:

- Organizations responsible for issue and control of stamps.
- Administrative procedures for request, issue, control, accountability, revocation and recall of stamps.
- Procedures and responsibilities for inventory of stamps to be conducted at least once a year.
- Requirements for documenting request, issue, recall, relocation, loss and annual inventory of stamps.
- All stamps and design requirements authorized for use in depot maintenance operations.

2.9.3. Examples of AFMC authorized depot maintenance stamps are depicted in attachment 8. All stamps will be of a size as to not obliterate any other stamp or information on the WCD.

Chapter 3

PREPARING MASTER WCDS AND PROCESS ORDERS

3.1. AFMC Forms 958/959, Work Control Documents. AFMC Forms 958/959 are used for repetitive workloads processed through the maintenance shops. The Form 958 is an automated version of the 959. When WCDs are required in sufficient numbers to justify maintaining printed stocks on hand, the original WCD is known as the "master." The production planning team prepares the master WCDs and makes sure as many blocks as possible are preprinted. Sufficient information should be provided to ensure that workers can produce quality items with minimum reference to the source technical data. WCDs do not replace technical data and do not negate the requirement to have the source technical information readily available and used when appropriate.

3.1. (AMARC) Master work control documents are stored in the computer and updated by the preproduction planning team prior to the project going into work.

3.2. Preparation of Master AFMC Forms 958/959. Prepare the master WCD AFMC Forms 958/959 as shown in attachment 1. As a minimum, the data required in this attachment must be used. Additional information used on the form must be documented in a local operating instruction. The original WCD is maintained on file by the originating planner and must contain the office symbol and term "OVERPRINT" in the lower portion of the form. Manual annotations on the preprinted WCDs must be stamped or initialed by the industrial engineering/planning technician making the entry and will be incorporated into the WCD at the next revision. Manual or computer generated WCDs may be used, however, computer generated documents must be developed and approved according to Air Force and AFMC guidance.. Master AFMC Forms 958/959 will be maintained for a minimum of 5 years.

3.2.1. Reproduction of AFMC Forms 958/959. Reproduce the completed master 959 on both sides of 8 1/2 X 11 inch bond paper. Use of blank cardstock is authorized for reproducing 959s when excessive handling or working conditions make the use of bond paper impractical. Master 959s may be printed on colored bond or cardstock paper to facilitate shop or task identification. Use of cleanroom paper is authorized for clean rooms, controlled areas, or laboratories as needed. Before reproduction is authorized, the scheduling function will coordinate with the industrial engineering/planning technician to make sure the WCD is a duplicate of the master.

3.2.2. Processing AFMC Forms 958/959. Attach and protect as necessary the AFMC Forms 958/959 to the items to be worked. These forms must accompany the item until the item is complete and all certifications are accomplished or be placed in a designated supervisor file, or for those items where attachment is not practical, until the item is complete and certified. Once the production supervisor has certified the "P" block and entered the date, the forms are given to the scheduling for production count processing. The completed AFMC Forms 958/959 are retained as specified in AFMAN 37-139, *Records Disposition Schedule.* Longer retention may be locally authorized for specific documents in the case of safety critical items (i.e., mishap investigations).

3.3. AFMC Form 173. AFMC Forms 173 are WCDs used for Programmed Depot Maintenance (PDM), modifications, and other repetitive aircraft workloads. Planning is responsible to develop an effective plan of action for accomplishing work requirements from the approved Project Directive and work specification. They will also assign a work specification code to every operation that will relate back to a specific task in the MRRB Brochure or other Project Directive. The G037E or G097 system provides

information to the system user for planning, scheduling and controlling the modification or repair workloads.

3.3.1. Preparation of Master AFMC Form 173. As a minimum, the items listed in attachment 2 must be completed. Method Resource Standards (MRS) describes the tasks or operations applicable to a MDS/project serial number and identifies the resources (skills and equipment). The original WCD is maintained on file by the originating weapon system planner in a Master Deck located in the appropriate planning office.

3.3.2. Definitized List. The G037/G097 systems provide an additional document, which can be used as abbreviated technical data in the form of Definitized Lists. The definitized list is a computer generated document created by Planning to provide a detailed step-by-step breakdown of the operation, but does not duplicate technical data. It is prepared as detailed in attachment 3. It is used to supplement a TO. It is also used in reference to TEAM TASK signature documents.

3.3.3. Unpredictable AFMC Form 173. Unpredictables can be either planned or unplanned, based on the expected frequency of the work and the nature of the operation (complexity and criticality). Unpredictable operations that occur on at least 20 percent of the job order numbers will be fully planned. Formal planning is not always completed on low frequency operations. Handscribed documents can be used if no formal WCDs are available. All operations that occur will be planned when work is critical or complex, even if the operation is performed on less than 20 percent of the job order numbers. Unpredictable operations can be either Project Related (PR) or Non-Project Related (NPR). If the stumble-on is defined as NPR, the Project Administration Office (PAO) must approve the task for Over-and-Above funding before it is worked. All unpredictable AFMC Form 173s will be processed through the Maintenance Review Team (MRT) and PAO for approval. The MRT and PAO must place their appropriate stamps on the WCD before it is approved for work. This indicates all technical research has been completed. Preparation criteria and responsibility is shown in attachment 3.

3.4. Process Orders. AFMC Form 561 is used where needed to describe specific applications, procedures, techniques, methods and shop practices to complement technical data. The process order must not violate technical data requirements. Process orders will be referenced in applicable WCDs and definitized lists.

3.4.1. Process order requirements are determined by the production planning team and are issued by the appropriate engineering and planning organization. The originator can request technical expertise from organizations such as the physical sciences laboratories as required. Coordination is obtained from other affected engineering and planning organizations and other applicable functions to ensure compatibility of processes among organizations. Coordination actions are shown on the process order. Coordination by the applicable safety function is mandatory.

3.4.2. Prepare process orders according to directions in Attachment 6. Figures and diagrams may be added to the process orders if locally authorized. The process order number is obtained as locally determined. Local procedures are developed to allow for ready identification of the OPR for specific documents and for the preparation of a master listing for identification and control of all process orders. Process order guidelines are shown in Attachment 6.

3.4.3. Each process order OPR will review their process order biannually to ensure continued currency. OPRs must update status of process orders to the applicable distribution function as soon as possible so they can update the master process order index.

3.4.4. (Added-AMARC) Each division operations support branch chief will publish a division master list of all Process Orders (PO) for those generated within the branch and maintained and controlled by that branch. A copy will be provided to all the process division operations support branch chiefs for potential adaptation in other divisions. The biennial reviews and updates will be monitored, suspensed and published by each operations support branch chief.

3.5. Prescribed Forms: AFMC Form 76, AFMC Form 127, AFMC Form 127A, AFMC Form 137, AFMC Form 173, AFMC Form 206, AFMC Form 237, AFMC Form 240, AFMC Form 561, AFMC Form 958, and AFMC Form 959.

THOMAS W. BATTERMAN, SES, Deputy Director
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Attachment 1

GLOSSARY OF TERMS

Terms

Abbreviated Tech Data—A breakout listing of step-by-step tasks for a single operation, authorized by the cognizant engineering authority.

ADPS—Automated Data Processing Systems.

"At the Job Site"—In the immediate vicinity where the work is being performed, i.e., work bench, aircraft stall, etc.

Critical Task—Any task, that if not done correctly, can result in one of the following conditions: (1) a catastrophic failure of an end item; (2) an end item failure that may affect safety of flight; or (3) where end item failure may present an imminent safety/health hazard or affect a life support system.

DTA—Decision Tree Analysis; policy prescribed in AFMCI 21-101**.**

Definitized Lists—Supplemental listing of step-by-step tasks for a single WCD operation which must be worked in sequence.

DFT—Depot Field Team.

Depot Maintenance—This designates all workloads performed by the organic facilities of the DMAG. This includes both depot level maintenance and other services.

Informal Tech Data—Notes, manuals and drawings that are not an official part of the TO System, or uncontrolled copies or pages of formal technical orders.

"In Use"—(1) The mechanic must be able to cite the governing TO for the task at hand, be able to go directly to it and find the source information, and must be doing the job according to the source documents, or (2) have the documents open to the correct page and in actual use.

Inventory Tracking System (ITS)—The command standard automated system for managing exchangeable production.

Job Guides—Abbreviated Technical Order, used for performing maintenance

Maintenance Stamps—Numbered stamps, generally assigned to a technician for the purpose of signing off work performed and used as an audit tool.

MDC—Maintenance Data Collection

Management of Items Subject to Repair (MISTR)—Items programmed for repair to support the supply-demand system.

Nonprogrammed Work—Any work performed by the organic facility that is not pre-planned and resources not budgeted for.

Operation—A step in the accomplishment of a task, sequenced to be worked during the maintenance cycle, denoting the Resource Control Center (RCC), skill, PAC requirements and technical data needed.

PDMSS—Programmed Depot Maintenance Scheduling System (G097)

Process Order—Written process used where needed to describe specific applications, procedures,

techniques, methods, and shop practices to complement technical data.

Project Directive—Document, which includes all negotiated workloads other than MISTR that have a defined production count and control.

"Readily available"—The mechanic has the TO in hand or within easy access to the job site.

Rework—Any work done to correct deficiencies in work previously accomplished.

Routed Order—Maintenance document used for support maintenance from one directorate to another.

Secondary Certifications—Tasks determined to be **Critical** will be certified by a second qualified technician, either in-process or end-process.

SSQ—Special Skills Qualifications

Task—Depot maintenance requirements requested by the System Engineer or the customers, to inspect and/or repair an item or system.

TCTO—Time Compliance Technical Orders

Technical Data—The only authorized source of information used to perform work or locally developed instructions to accomplish technical requirements.

Temporary Work Request—Request to accomplish unprogrammed depot maintenance.

Uncontrolled Tech Data—Technical data not file maintained and documented.

Uncontrolled Copies—Copies or extractions made from technical data.

Unpredictable—Defects discovered by maintenance personnel, as a result of an inspection, that is not planned, but must be worked.

Work Control Document—An instruction and guidance document summarizing sequenced steps and the TO references for processing the item.

Work Specification—The definitive instruction of all the work to be accomplished and the technical data to work by.

Attachment 2

INSTRUCTIONS FOR COMPLETING AFMC FORM 959/958

BLOCK #	TITLE	CONTENT
1.	Date	Enter Date (last digit of the year followed by the Julian date the form was initiated or revised).
2.	Job Order Number	Enter the control number and job designator (the three digit JON suffix will be inserted when the item is scheduled for work).
3.	Quantity	Enter the quantity. The quantity will exceed one each only when identical items are grouped and there is no requirement for the return of a portion.
4.	Production Section/ RCC	Enter the symbol for the responsible performing production section/RCC.
5.	Date Scheduled	Leave blank. The scheduling function enters the date when the items are placed into work.
6.	Date Completed	Leave blank. The scheduling function enters the date after the work is completely PAC and P/supervisory certified.
7.	Part Number	Enter the part number. When the WCD is for more than one part then all part numbers, NSNs and production numbers can be listed, blocks 12 and 17 can be used for continuation. When multiple part numbers are listed, the scheduling function designates part number, NSN, and control number combination for the item by circling the appropriate part when block five is completed.

Caution: Ensure all operations/tasks in block 17 are compatible with part numbers listed and operations/ tasks requiring secondary certification is listed separately. If not, additional entries are required or a new WCD is made.

8.	Tech Data	Enter the technical data source. Specific references are entered with tasks/operations as when entered in block 17.
9.	Item Serial Number	Leave blank. The scheduling function enters the serial number when block 5 is completed.
10.	Mission-Design-Series	Enter the MDS when the item is routed from an aircraft, engine or other major end item.
11.	Stock Number	Enter the complete stock number to include the MAC if applicable. If not stock listed or coded, so state.
12.	Optional	Used to identify documents that require secondary certification or rework (see paragraphs 1.7 and 1.12) and local requirements.
13.	Serial Number	The scheduling function enters the aircraft tail number if applicable.
14.	Noun	Enter the nomenclature identifying the item.

15.	Dispatch Station	Enter the dispatch station number. When routed to more than one building, include building numbers.
16.	PDN/OP Number	Enter the performing RCC if different from block 4 and Ops numbers from labor plan. Do not duplicate numbers.
17.	Work to be Accomplished	Enter description of work. Secondary Certification tasks must belisted separately. Include enough detail to document the exact sequence of work to be performed. Include drawings if necessary. All cautions, warnings and notes must be included unless the source technical data is required to be open and in actual use with the WCD during work accomplishment
18.	Mechanic	The mechanic certifies the completion of the operation/task. If more than one mechanic is involved, the responsible mechanic completes this block.
19.	"P"	Used by the responsible supervisor to verify all work has been completed. “P” stamps are used as locally specified.
20.	"Q"	The mechanic documenting secondary certification and/or the quality verifier uses this block.

NOTE: The requirements of blocks 15, 16, 17, 18, 19 and 20 are determined by the production planning team. Local variations can be used for blocks 18, 19 and 20 to code and document PAC, Secondary Certification, quality and supervisory certifications/verifications. All operations/tasks must be certified/verified by stamping or electronically completing in the appropriate blocks. Operations not required (NR) or previously complied with (PW) are so indicated, certified/verified, and dated by the appropriate person.

21.	Final Destination	Enter the destination or dispatch station and functional code of the RCC responsible for disposition of routed item.
22.	Coordination/Initiating RCC Signature/Date	Enter the office symbol, date, and signature of the production planning team representative.
23.	Document S/N	Enter the serial number of the form as required. Sequential numbering may be used or this number can be used along with the publication date to control form revisions. It can also be used for suspense or other tracking purposes.

NOTE: When the systems generated version of the WCD does not have blocks numbered and arranged as described above, local procedures should be developed to ensure essential elements are captured and accountability is maintained by the creation of a complete audit trail.

Attachment 3

INSTRUCTIONS FOR COMPLETING AFMC FORM 173

Procedure for completing handscribed AFMC Form 173, the responsible agent and the process for closing-out the discrepancy. These are guideline requirements for all authorized similar aircraft WCDs, handscribed or system generated.

The following blocks must be completed by the initiator:

BLOCK #	TITLE	CONTENT
40	Initiator	Name of Mechanic or Planner
1	Date	Date the 173 is initiated
2	Skill Code	Skill of Mechanic to accomplish Operation
4	JON Number	Job Order Number for the aircraft
7	Number of Workers	Number of workers required to do the task
8	Area	Location of discrepancy
12	Work Cat	Work Category Description (Unpred, Shakedown or Over & Above)
19	RCC	Resource Control Center (Coincides with Skill)
23	Work Unit Code	5 digit, alphanumeric code used to identify the system, subsystem and component which are worked on
26	How Mal	3 digit, numeric code used to describe the equipment malfunction
29	Inspection Code	2 digit, alpha code identifies the PAC/Quality level of required inspection. Assigned by supervisor and "P" stamped
30	Facility Code	System Requirement for Capacity Utilization
31	Description	Detailed description of discrepancy, repair & Tech Data

Maintenance Review Team distinguishes whether defect is PR or NPR and places appropriate stamp over-layed blocks 45, 46,12, 13, 14 & 15.

Planning reviews defect, verifies Technical Data, checks for follow-on maintenance and applies an estimated standard in block 5.

PAO places Approval or Disapproval stamp over blocks 33, 34 & 35.

Scheduling places Operation Number in block 3, unpredictable or over & above as determined by the MRT

Attachment 4

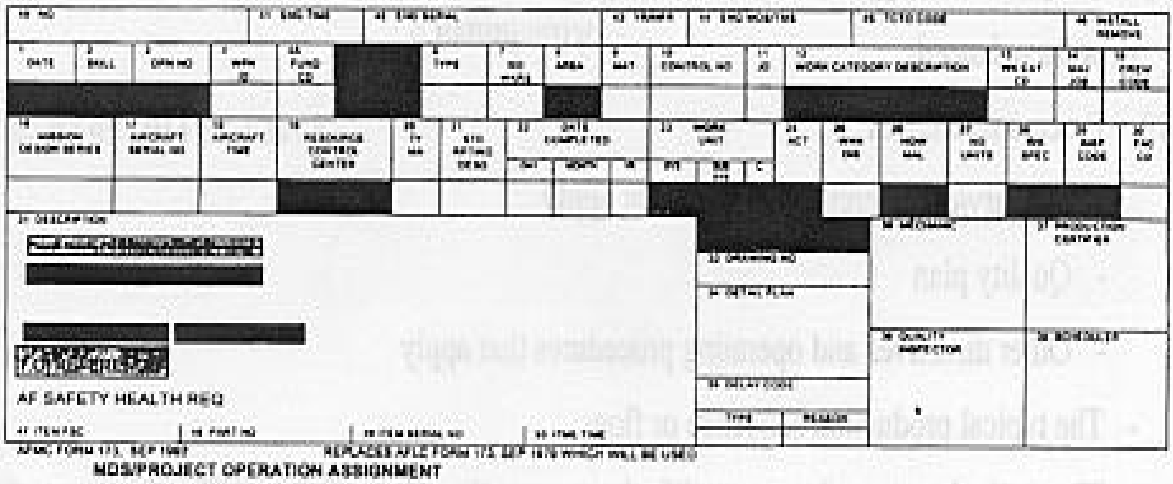
INSTRUCTIONS FOR COMPLETING DEFINITIZED LIST

COLUMN #	TITLE	CONTENT
1-3	9HB	System Transaction Designator
4-5	Originator Code	Last Two Digit Planner
6-7	Design Code	Weapon System Design is preestablished in G037E Data Base but is placed on the WCD by the Planner
8-12	Operation Number	Enter the Operation Number shown on the AFMC Form 138 (Input document for 173)
13	Action Code	Enter applicable code A for addition; C for change; and D for Delete
14	Format Code	Format Code is B
15-19	Suboperation Number	Suboperation number is five numeric numbers in any ascending order generally starting with 00010 and increasing in increments of ten to allow for alterations
22-23	PAC/Verification Code	Two digit alphanumeric code designating the level of PAC Certification required for this step
24-25	Indicator Code	Two digit numeric code (01-99) for each line under a Suboperation
26-80	Suboperation Description	Operation description that best describes this step. Each line must have a new dicator code.

Attachment 5

CLEARING WCDS

PROCEDURES FOR CLEARING AFMC



BLOCK #	TITLE	CONTENT
22	Date Completed	Mechanic places the date task is complete
32	Actual Hours	Mechanic annotates actual hours spent on operation
36	Mechanic Stamp	Certified Mechanic places M Stamp
37	Production Certifier	Secondary Certification if required
38	Quality Evaluator	QE annotates if required
39	Scheduler	Scheduler stamps & dates to clear document

Attachment 6

PREPARING A PROCESS ORDER

Purpose - a brief reason for the process order.

Scope - describe the scope.

General Information - this section provides information about the overall process. Process orders are either oriented to a specific process or to a component. Content depends upon the complexity and criticality of the process. Suggested content for these two kinds of process orders is as follows:

Process oriented:

- Process references
  - Military/commercial standards that apply
  - Quality plan
  - Other directives and operating procedures that apply
- The typical production sequence or flow
- The method or procedure to qualify the process (i.e., first article, certification team, etc.)
- Process controls that will be used
  - The method and frequency of sampling
  - Specific quality requirements
  - Limits for product characteristics
  - Any general parameters that apply
- Equipment
  - The equipment capabilities and work environment
  - The installation requirements and qualification
  - Preventive maintenance requirements
- The procedure for qualification of the process and approval methodology
- List of process operation sheets and/or other procedure specifications
- Non-Conforming Material or Process Results
- List of applicable Process Operation Sheets (POS) and/or Procedure Specifications

Component oriented:

- Title
  - Name of part/process POS is applicable
  - Date of original issue
  - Reaffirmed date
  - Revision number

- The part numbers the process order supports

- The technical data that applies

- The WCDs that apply

- Clear and concise instructions on how to perform the operations on the components (note: all requirements must be consistent with the applicable technical data)

- Any critical considerations or other workmanship criteria (secondary certification may be required on the WCD).

Procedure - this is the how-to instruction to include cautions and warnings that apply.

- Title

  - Name of part/process POS is applicable

  - Date of original issue

  - Reaffirmed date

  - Revision number

- The Part Number applicable

- T.O. reference

- WCD reference

- Specific component repair equipment parameter settings

- **Note:** Only one feature of the repair shall be applicable for each sheet. Each feature repair will have its own Procedure Specification (PS). If this feature repair is performed on more than one model of equipment, each model will have an applicable PS for that feature.

- List all consumable materials

- Measure of difficulty of repair

- Generically state the NDI requirements

- Must reference a Procedure Qualification Record

Safety Notes - identifies any steps or materials that present safety hazards to include environmental impact

Coordination - list the coordination required for the process order

The completed process order is approved by the chief of the responsible engineering planning function by signing block 13, "Approval." This organization is the office of primary responsibility (OPR) for the process order.

(Added-AMARC) Planners determine the need for POs but may request technical assistance from other areas to prepare one. Show the coordination that is made to ensure process compatibility on the form. It is mandatory, IAW this instruction, to coordinate with CC-SE.

(Added-AMARC) POs will be numbered in block 3 as follows: Originator office symbol, Year, Consecutive serial number.

Attachment 7

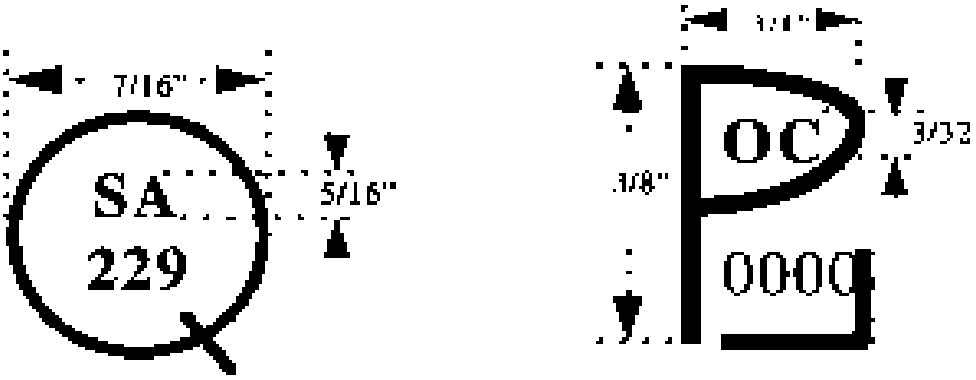
PAC CERTIFICATION/INSPECTION CODES

M	Requires certification by **ONE** PAC Certified Worker. Code is placed in the first position of the inspection block of WCD.
E	Requires certification by **TWO** PAC Certified Workers for end process/product validations. Code is placed in the first position of the inspection block of WCD.
I	Requires certification by **TWO** PAC Certified Workers for in-process validations. Code is placed in the first position of the inspection block of WCD.
N	Requires certification by a PAC certified worker to accomplish nondestructive inspections (NDI). Secondary Certification is **NOT** Required. Code is placed in the first position of the inspection block of WCD.
Q	Requires inspection by a qualified quality inspector for in-process or end product verification. Also requires appropriate PAC certification. The Q will be placed in the second position of the inspection block of the WCD.
D	Requires review by a DCMC inspector/evaluator. The D will be placed in the second position of the inspection block of the WCD.
X	PAC Certification **not required**. Code is placed in the first position of the inspection block of WCD (i.e., Information, Scheduling task, trigger operations). **(AMARC)** Extended to include non-aircraft or non-component operations (i.e. picking up records, cleaning parts, tagging parts, packing parts/aircraft, shipping, demil of off-equipment parts) as determined by the planner. An X in the first position of the PAC certification blocks will identify motor pool, packing, woodmill, shipping, and administrative functions with no stamp nor PAC certification required.
P (Added-AMARC)	Requires completion certification for the critical tasks/operations on the WCD. This code is placed in the second position of the inspection block of the WCD.
R (Added-AMARC)	An R in the first position will indicate radiation certification.

Attachment 8

TYPICAL MAINTENANCE STAMPS

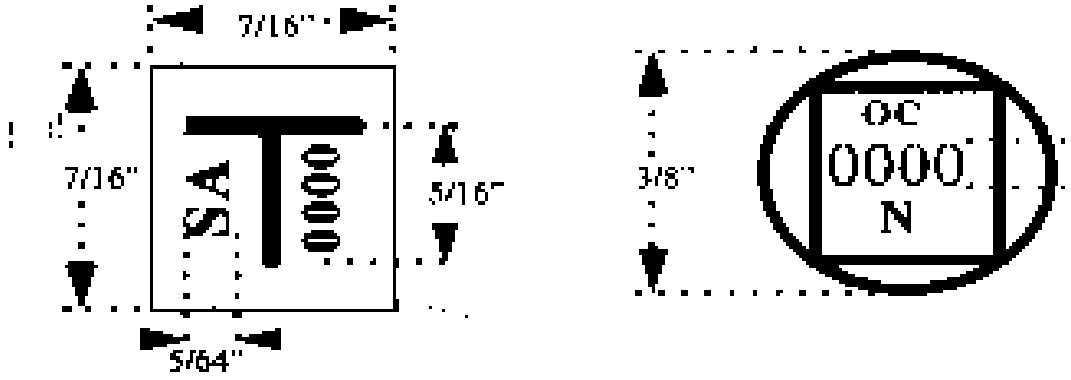
ENLARGED



Quality Assurance "Q" Production Supervisor

LEGEND

OC-OC-ALC, Tinker AFB OK
OO-OO-ALC, Hill AFB UT
SA- SA-ALC, Kelley AFB TX
SM-SM-ALC, McClellan AFB CA
WR-WR-ALC, Robins AFB GA
AMR-AMARC, Davis-Monthan AFB AZ



Final Functional Test "F" Nondestructive Inspection "N

Attachment 9 (ADDED-AMARC)

ACCESSING AND UPDATING AFMC FORM 959

A9.1. Open Network Neighborhood to Entire Network to Dm to Dma-fs-b7328-1 (M:).

A9.2. Open the Access program.

A9.3. Open the file named 958.mdb.

A9.4. Single click on WCD95OP.

A9.5. If you know the name of the job plan:

A9.5.1. Open FORMS, enter the name (ROUTE95) and enter the password.

A9.5.2. Activate the FIND RECORD option and delete the previous NAME.

A9.5.3. Type in the name of the job that you wish to perform maintenance. **Note:** It must be exact including capitalized letters, SUPP PKG number, if any, and TYPE IND code (table 1).

A9.5.4. Activate the APPLY FILTER button on the top right side and proceed to the UPDATE section in paragraph 3.

A9.6. If you don't know the name of the job plan:

A9.6.1. Open QUERIES, open a category; enter the name (ROUTE95) and the password.

A9.6.2. Highlight a record NAME, right click and COPY.

A9.6.3. Close or minimize this screen to return to your original work screen.

A9.6.4. Reactivate the FORMS window of the work screen, open a category, select FIND RECORD, delete the previous NAME, right click, PASTE and type the SUPP PKG and TYPE IND.

A9.6.5. Activate the APPLY FILTER button on the top right side and proceed to the UPDATE section (paragraph 3).

A9.7. Copy/Renumber/Resort AFMC Form 959's.

A9.7.1. Enter Internet Explorer.

A9.7.1.1. Go to web site http://131.50.33.225/webapps/958 mods/.

A9.7.1.2. Enter your name and computer logon password.

A9.7.2. To copy an AFMC Form 959:

A9.7.2.1. Enter the name of the record AFMC Form 959 you wish to copy from.

A9.7.2.2. Enter the name of the SUPP PKG (if any) and the TYPE IND (table 1). NOTE: SUPP PKG is the version/revision number given to the AFMC Form 959 when it was originally input; in some cases this field was not used, therefore, you only need to put a space in this field

A9.7.2.3. Enter the name in the COPY TO box.

A9.7.2.4. Enter the new name of the new SUPP PKG (if any) and the applicable TYPE IND.

A9.7.2.5. Activate the SUBMIT button.

Table A9.1. Type IND Codes.

Cd	Description	Cd	Description
A	Aircraft reclamation	O	Overland withdrawal
C	Component repair (specialized repair activity)	P	Process In
D	Drone flyaway	R	Represervation
E	Engine reclamation	S	Special
F	FPRAM cover aircraft	T	Storage upgrade
G	Flyable hold	U	Upgrade Navy mobility
H	Demilitarization	W	Withdrawal flyaway
I	Initial mob upgrade	X	X-Ray condition inspect (ACI)
M	Maintain in	Spc Bar	MSP (space bar to access this category)
N	Navy mobility		

A9.7.3. Renumber an AFMC Form 959:

A9.7.3.1. In the resequence section, activate the RENUMBERING selection.

A9.7.3.2. Enter the record name of the AFMC Form 959 you wish to renumber.

A9.7.3.3. Enter the name of the SUPP PKG (if any) and the TYPE IND.

A9.7.3.4. Activate the SUBMIT button.

A9.7.4. Resort AFMC Forms 959 by work code and operation number.

A9.7.4.1. In the resequence section, activate the RESORTING selection.

A9.7.4.2. Enter the record name of the AFMC Form 959 you wish to resort.

A9.7.4.3. Enter the name of the SUPP PKG (if any) and the TYPE IND.

A9.7.4.4. Activate the SUBMIT button.

A9.8. Updating AF Forms 959.

A9.8.1. Delete a record – use the WCD958OP category, find the record that you want to delete, activate the top button – right side marked X (delete record) and activate the yes or no prompt. If it is not on your tool bar, go to the EDIT option on the tool bar and select the X Delete Record from the drop-down menu.

A9.8.2. Delete an entire file – use the WCD958HD category and activate the top button – right side marked X (delete record) if this button is on your tool bar, and activate the yes or no prompt. If it is not on your tool bar, go to the EDIT option on the tool bar and select the X Delete Record from the drop-down menu.

A9.8.3. Change a record – find the operation number, type in the changes and activate the SAVE RECORD button.

A9.8.4. Duplicate a record – activate the DUPLICATE RECORD button, make changes and activate the SAVE RECORD button.

A9.8.5. Add an operation – go to the end of the file, add the operation and activate the SAVE RECORD button.

A9.8.6. Find an existing operation within a record – Click your cursor in the OPERATION field, enter CONTROL F, type in the operation number you are looking for and activate the FIND FIRST button.

A9.8.7. Renumber the record number – Click your cursor in the OPERATION FIELD, right click and select the SORT ASCENDING option.

A9.8.8. Add an entire new file (without copying another file) – Use the WCD958HD category, type in the new name of the record, SUPP PKG (use the space bar if the SUPP PKG is blank) and TYPE IND (table 1), then click on the SAVE RECORD button. Use the WCD 958OP category and go to paragraph 3.5 to complete the new file.

A9.8.9. Blocks 21 through 23 of AFMC Form 959 are not used at AMARC.

A9.8.10. Enter the project description block 12.

A9.9. To Print AFMC Forms 959:

A9.9.1. Open MAXIMO.

A9.9.2. Open CUSTOM APPLICATIONS.

A9.9.3. Open FILE.

A9.9.4. Open REPORTS.

A9.9.5. Open 958 PRINT.

A9.9.6. Select RUN.

A9.9.7. Choose PRINT or PREVIEW (default is PREVIEW).

A9.9.8. Select OK.

A9.9.9. Type in the NAME of the file you want to print; VERSION is used for SUPP PKG, leave blank if none exists. Optional: Type in the 8-character production control number (PCN) and that will be inserted into the WCD block 12, the model number will automatically be entered in block 10 and the serial number in block 13.

A9.9.10. Select OK.

A9.9.11. In the preview mode, click the LAST PAGE, then the FIRST PAGE. This allows paging through the preview for reviewing.

A9.9.12. After previewing, if you want to print, select the printer symbol on your tool bar.